ABSTRACT

The presence of natural organic matter (NOM) in water resources can significantly affect the organoleptic properties of water, inhibit the processes of drinking water treatment and may be harmful to organisms and to human health. That is why the drinking water treatment process is therefore emphasizes the elimination of natural organic matter by the best available techniques. To remove NOM is currently proving to be the most effective adsorption process on the activited carbon (AC). The process of adsorption of natural substances on activated carbon affects many factors. Important factors affecting adsorption are the solution properties such as pH, ionic strength (IS), chemical composition and temperature of the solution. Due to different water temperatures, depending on the season, the temperature can significantly affect the process of NOM adsorption on activated carbon in drinking water treatment. The authors in their works devoted primarily to the effect of pH on adsorption and in the literature is shown little information on the effect of water temperature on the adsorption of natural organic matter. This thesis deals with thermodynamics of adsorption of natural organic matter to activated carbon. Bachelor's thesis in the form of research describes the basic properties of thermodynamics of adsorption and presents some studies that deal with the effect of temperature on the adsorption of NOM. Use of the thesis is to summarize the information about the issues that will be utilized for further theoretical and practical research.